

REMARKS/ARGUMENT

Claims 1, 4-9, and 33-35 are pending after entry of the present Amendment. Applicants herein amend independent claim 1. Claim 1 has been amended to better describe the claim and no new subject matter has been added.

Rejections under 35 USC §102

Claims 1, 4, and 35 were rejected under 35 USC §102(e) as being anticipated by Aoi (U.S. Patent No. 6,197,696). The rejection is traversed, and Applicants request reconsideration.

In regards to independent claim 1, the process of preparing a dielectric structure for dual-damascene applications in Figures 15(a) – 17(c) and their related description in the specification of Aoi is a via first fabrication process. In a via first fabrication process, the via structure is formed before the trench structure is formed. For a via first fabrication, the patterned second silicon dioxide film 355 is needed to be used along with the patterned organic film 354A as a etch mask to etch vias (or contact holes 361). (*See*, Col. 19, lines 41-45, and Figures 16(b) and 16(c)) The patterned second silicon dioxide film 355 is also needed to be used along with the mask pattern 358 to etch the patterned organic film 354A to form wiring grooves. (*See*, Col. 19, lines 50-51, and Figures 16(c) and 16(d))

In contrast, independent claim 1 describes a trench first fabrication process, which forms the trench structure before forming the via structure. The processing sequences are very different between a via first fabrication process and a trench first fabrication process. In addition, the processing sequence defined in claim 1 of the claimed invention does not require a second dielectric layer on top of the carbon doped oxide layer. The existence of a film such as the second silicon oxide film on top of the low k dielectric layer increases the dielectric constant of the dielectric layer and RC delay between metal lines, which contradict with the goal of the claimed invention. Applicants therefore respectfully submit that claim 1 is patentable over Aoi, and request the allowance of independent claim 1.

Claims 4 and 35 are dependent claims of independent claim 1. Based on the argument described above for claim 1, claims 4 and 35 are also patentable over Aoi. Applicants respectfully request withdrawal of the rejection.

Rejections under 35 USC §103

Claims 33 and 34 were rejected under 35 U.S.C. §103(a) as being unpatentable over Aoi in view of Jang (U.S. Patent No. 6,110,648). This rejection is respectfully traversed, and Applicants request reconsideration.

As noted above, independent claim 1 is not anticipated by Aoi and therefore claims 33 and 34 are not rendered obvious by the combination of Aoi in view of Jang. To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references or in the knowledge generally available to one having ordinary skill in the art, to combine the references. In this case, when the references are combined the teachings fail to teach or suggest all of the claim limitations. Applicants therefore respectfully request that the rejections of these claims be withdrawn.

Claims 5 and 7-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Aoi in view of Wolf, et al. (Silicon Processing for the VLSI Era, Vol. 2-Process Integration, Lattice Press: Sunset Beach CA, 1990, p. 194). This rejection is respectfully traversed for the same reasons noted above for claims 33 and 34. Applicants therefore respectfully submit that claims 5 and 7-9 are patentable under 35 USC §103(a) over Aoi, in view of Wolf, et al., and request that the rejections of these claims be withdrawn.

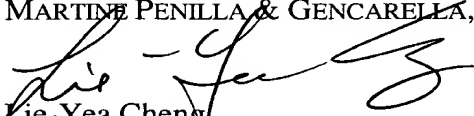
Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Aoi, in view of Jang (U.S. Patent No. 6,110,648) as applied to claim 1, 4, and 33 above, and further in view of Lee (U.S. 6,043,167). This rejection is respectfully traversed for the same reasons noted above for claims 33 and 34. Applicants therefore respectfully submit that claim 6 is patentable under 35 USC §103(a) over Aoi, in view of Jang, and further in view of Lee and request that the rejections of the claim be withdrawn.

In view of the foregoing, Applicants respectfully request reconsideration of claims 1, 4-9, and 33-35. Applicants submit that all claims are in condition for allowance. Accordingly, a notice of allowance is respectfully requested. If Examiner has any questions concerning the present Amendment, the Examiner is kindly requested to contact the undersigned at (408) 749-6924. If any additional fees are due

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in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. LAM1P106A). A copy of the transmittal is transmitted herewith for this purpose.

Respectfully submitted,
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